

Proposed Changes to the Massachusetts Contingency Plan – 310 CMR 40.0000

Proposed MCP Numerical Standards

Note to Reviewers: The equations used to develop the MCP Numerical Standards are described at <http://mass.gov/dep/cleanup/laws/standard.htm>. The spreadsheets used to calculate the proposed values are available at <http://mass.gov/dep/cleanup/laws/regulati.htm>.

DEP has reissued the proposed MCP Numerical Standards for perchlorate to allow for additional public comment following the release of the National Academy of Science report on perchlorate and the proposed Massachusetts MCL for perchlorate. Currently, since the MCP does not include a standard for perchlorate, a Method 3 Risk Characterization must be used to evaluate potential exposures at sites where perchlorate is a Contaminant of Concern. Documentation for the development of the perchlorate Reference Dose is available on-line at <http://mass.gov/dep/water/drinking/percinfo.htm>.

MCP Groundwater Standards

MCP Table 1 – 310 CMR 40.0974(2)

Proposed Changes to the MCP Groundwater Standards: Insert a row for Perchlorate between “Pentachlorophenol” and “Petroleum Hydrocarbons”

Oil and/or Hazardous Material	CAS Number	GW-1 Standard µg/liter (ppb)	GW-2 Standard µg/liter (ppb)	GW-3 Standard µg/liter (ppb)
Perchlorate	-	2	NA	1,000

MCP Soil Standards

MCP Table 2 - 310 CMR 40.0975(6)(a)

Proposed Changes to the MCP Soil Category S-1 Standards Applicable to Soil Where the Combination of Soil & Groundwater Categories Are...

Insert a row for Perchlorate between “Pentachlorophenol” and “Petroleum Hydrocarbons”

Oil and/or Hazardous Material	CAS Number	S-1 Soil & GW-1 µg/g (ppm)	S-1 Soil & GW-2 µg/g (ppm)	S-1 Soil & GW-3 µg/g (ppm)
Perchlorate	-	0.1	0.9	0.9

Proposed Changes to 310 CMR 40.0000

MCP Table 3 - 310 CMR 40.0975(6)(b)

Proposed Changes to the MCP Soil Category S-2 Standards Applicable to Soil Where the Combination of Soil & Groundwater Categories Are...

Insert a row for Perchlorate between "Pentachlorophenol" and "Petroleum Hydrocarbons"

Oil and/or Hazardous Material	CAS Number	S-2 Soil & GW-1	S-2 Soil & GW-2	S-2 Soil & GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
Perchlorate	-	0.1	5	5

MCP Table 4 - 310 CMR 40.0975(6)(c)

Proposed Changes to the MCP Soil Category S-3 Standards Applicable to Soil Where the Combination of Soil & Groundwater Categories Are...

Insert a row for Perchlorate between "Pentachlorophenol" and "Petroleum Hydrocarbons"

Oil and/or Hazardous Material	CAS Number	S-3 Soil & GW-1	S-3 Soil & GW-2	S-3 Soil & GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
Perchlorate	-	0.1	5	5

MCP Table 5 – 310 CMR 40.0985(6)

Proposed Changes to the MCP Method 2 – Direct Contact Exposure-Based Soil Concentrations Applicable to the Specified Soil Category

Insert a row for Perchlorate between "Pentachlorophenol" and "Petroleum Hydrocarbons"

Oil and/or Hazardous Material	CAS Number	Soil Category S-1	Soil Category S-2	Soil Category S-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
Perchlorate	-	0.9	5	5

Proposed Changes to 310 CMR 40.0000

MCP Upper Concentration Limits (UCLs)

MCP Table 6 – 310 CMR 40.0996(7)

Proposed Changes to the MCP Upper Concentration Limits (UCLs) in Groundwater and Soil
Insert a row for Perchlorate between “Pentachlorophenol” and “Petroleum Hydrocarbons”

Oil and/or Hazardous Material	CAS Number	UCLs IN GROUNDWATER	UCLs IN SOIL
		µg/L (ppb)	µg/g (ppm)
Perchlorate	-	10,000	50

Proposed Changes to 310 CMR 40.0000

Reportable Concentrations (RCs)

MCP Massachusetts Oil and Hazardous Material List – 310 CMR 40.160000

Proposed Changes to TABLE 1 - Massachusetts Oil and Hazardous Material List (Alphabetical List)

MODIFY existing entries as indicated. INSERT “Perchlorate Compounds, NOS” and “Potassium

Perchlorate” alphabetically on the list, as appropriate.

Chemical Name	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
AMMONIUM PERCHLORATE	07790-98-9	10	6,1	0.002	1	0.1	5
SODIUM PERCHLORATE	07601-89-0	10	6,1	0.002	1	0.1	5
PERCHLORATE COMPOUNDS, NOS		10	6,1	0.002	1	0.1	5
POTASSIUM PERCHLORATE	07778-74-7	10	6,1	0.002	1	0.1	5

MCP Massachusetts Oil and Hazardous Material List – 310 CMR 40.160000

Proposed Changes to TABLE 2 - Massachusetts Oil and Hazardous Material List (CAS NUMBER ORDER)

MODIFY existing entries as indicated. INSERT “Perchlorate Compounds, NOS” and “Potassium Perchlorate” alphabetically on the list, as appropriate.

CAS NUM.	Chemical Name	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
07790-98-9	AMMONIUM PERCHLORATE	10	6,1	0.002	1	0.1	5
07601-89-0	SODIUM PERCHLORATE	10	6,1	0.002	1	0.1	5
07778-74-7	POTASSIUM PERCHLORATE	10	6,1	0.002	1	0.1	5

“Harmonization” Language:

PUBLIC WATER SUPPLIES

Note to Reviewers: DEP has an interest in providing consistent approaches to the evaluation of similar conditions. For example, the MCP Method 1 GW-1 standards have been set equal to existing drinking water standards and guidelines, where they exist. In the following language, DEP proposes to explicitly state that any evaluation of a public water supply system for short-term use shall use the procedures adopted pursuant to 310 CMR 22, the Drinking Water Regulations. This change will allow DEP to “speak with one voice” on the acceptability of water for public consumption when provided by a Public Water Supply. By defining compliance with 310 CMR 22 requirements to be “No Imminent or Substantial Hazard”, the proposal eliminates the need to quantitatively evaluate potential Imminent and Substantial Hazards under the MCP. The proposed language continues to allow Public Water Suppliers to be eligible for Downgradient Property Status (DPS) under MCP and a liability endpoint under Brownfields Act (Section 5D). DEP seeks comment on the clarity of this language, whether the proposed text meets the goal described above, and the scope of the proposed regulation.

Note that this proposal does not change the determination on the need for cleanup of the public water supply, the evaluation procedures for a private water supply (which is not regulated pursuant to 310 CMR 22), nor does it change the procedures for evaluating the groundwater in a GW-1 area.

Note also that this language is proposed in lieu of previously proposed changes to the MCP Imminent Hazard Evaluation requirements at 310 CMR 40.0955(2)(e) specific to perchlorate and the proposed change to 310 CMR 40.0412 concerning Immediate Response Actions that would have required IRAs to address non-reportable Imminent Hazards.

40.0950: Imminent Hazard Evaluations and Substantial Hazard Evaluations

40.0951: Purpose and Scope of Imminent Hazard Evaluations

- (1) The site shall be evaluated to determine if an Imminent Hazard exists in accordance with 310 CMR 40.0000. The decision to conduct a quantitative Imminent Hazard Evaluation shall use the Response Action Performance Standard (RAPS) described in 310 CMR 40.0191, and consider the location and nature of the oil and/or hazardous material, the Human or Environmental Receptors which may be exposed, and appropriate guidance published by the Department.
- (2) If the results of this assessment indicate that the conditions at the site pose an Imminent Hazard based upon the criteria described in 310 CMR 40.0955, the Department shall be notified in accordance with 310 CMR 40.0311(7). Subsequent assessments performed as part of an Immediate Response Action shall consider the weight of evidence indicating the potential for an Imminent Hazard when making the evaluations described in 310 CMR 40.0426.
- (3) Notwithstanding the provisions of 310 CMR 40.950 et seq., the concentration of each oil or hazardous material present in a system of water supply used by a public water system, as defined in 310 CMR 22.00, shall not pose an Imminent Hazard or Substantial Hazard for current conditions if the public water system is in compliance with all applicable provisions of 310 CMR 22.00 and any other requirements specified by the Department pursuant to its authority under M.G.L. c. 111, s.160 and 310 CMR 22.00.